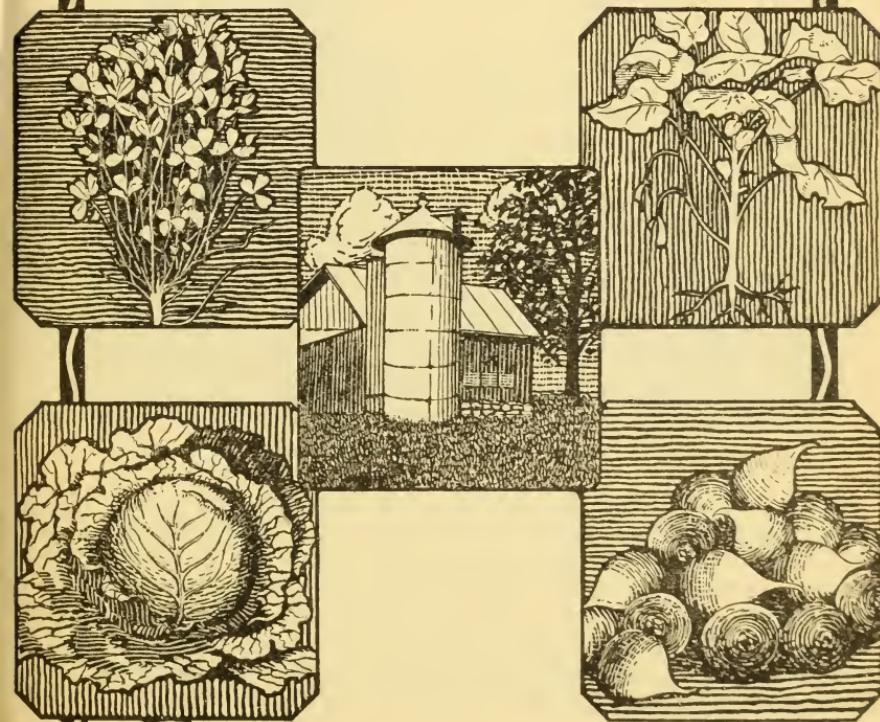


# Historic, archived document

Do not assume content reflects current scientific knowledge, policies, or practices.



# PREVENTING FEED FLAVORS AND ODORS IN MILK



LEAFLET NO. 25  
U.S. Department of Agriculture

Issued September, 1928.

## PREVENTING FEED FLAVORS AND ODORS IN MILK

BY C. J. BABCOCK, *Associate Market Milk Specialist, Bureau of Dairy Industry*

Milk containing abnormal flavors and odors is rejected by dealers and consumers. The producers of milk are giving considerable attention to the prevention of losses caused by the souring of milk. They too rarely recognize, however, that the production of milk containing flavors not due to souring is causing an annual loss probably as great as that from sour milk.

### CAUSES OF FLAVORS AND ODORS IN MILK

Cows' milk has more or less pronounced flavors and odors, varying from those which are pleasing to others which make the milk objectionable. They result mainly from four causes: (1) The physical condition of the individual cow, (2) highly flavored feeds and weeds, (3) odors absorbed by milk after production, and (4) biological changes in the milk.

Flavors and odors caused by the physical condition of the cow and by highly flavored feeds and weeds are noticeable just after the milk is drawn and usually do not increase with time. Those slight flavors and odors caused by absorption after the milk is drawn develop only when the atmosphere to which milk is exposed is permeated with pronounced odors, whereas those due to biological changes become more apparent after some time has elapsed.

### FEEDS DIFFER IN EFFECTS

Feed flavors and odors in milk are most frequently caused by succulent feeds. When fed to dairy cows one hour before milking silage made from corn, alfalfa, sweet clover, or soy beans; and green alfalfa, cabbage, turnips, rape, and kale seriously affect the flavor and odor of milk. (Fig. 1.) Green rye, green cowpeas, potatoes, dried beet pulp, and carrots affect milk only to a slight degree; whereas green corn, green oats and peas, green soy beans, pumpkins, and sugar beets have practically no effect on the flavor and odor of milk.

### FEEDING HIGHLY FLAVORED FEEDS

Proper methods of feeding are essential to the production of palatable milk. In most cases feed flavors are not imparted to milk except for a few hours after feeding. For this reason dairy cows should be given highly flavored feeds immediately after milking, never just before. When consumed in large quantities feeds such as cabbage, which has an unusually strong flavor and odor, occasion-

ally affect the quality of milk for 12 hours after feeding; but the intensity of the flavor has usually decreased to such an extent that it would not be noticed by the average consumer.

### WEEDS

Many weeds cause objectionable flavors and odors in milk. Such weeds should be eradicated from pastures. Until this is done, cows should be removed from infested pastures as long as possible before milking. The longer the interval between the removal of the cows from pasture and the time of milking, the less will be the intensity of the undesirable flavors in the milk. It is necessary to remove cows from garlic-infested pastures four to seven hours before milking to eliminate entirely the garlic flavor and odor from the milk. Some weeds, however, such as bitter weed, impart objectionable



FIG. 1.—Pastures may affect palatability of milk unless cows are removed several hours before milking

flavors several hours after consumption. If such weeds are present, it may be necessary to keep the cows off the pasture until the weeds are eradicated.

### ABSORBED FLAVORS AND ODORS

Feed and weed flavors and odors are imparted to milk mainly through the body of the cow. Feed-tainted barn air may have some effect on the flavor and odor of milk, but it is of relatively small importance even under extreme conditions.

### AERATE MILK PROPERLY

Proper aeration and cooling (fig. 2) reduce strong feed flavors and odors and sometimes eliminate slight flavors and odors. Therefore, when the practice of feeding immediately after milking is followed by proper aeration of the milk, most highly flavored feeds will not make the milk unpalatable.

## CONCLUSIONS

In the production of palatable milk, preventive measures are always best. Therefore dairymen should (1) feed just after milking all material likely to taint milk, (2) keep cows and barns clean, (3)

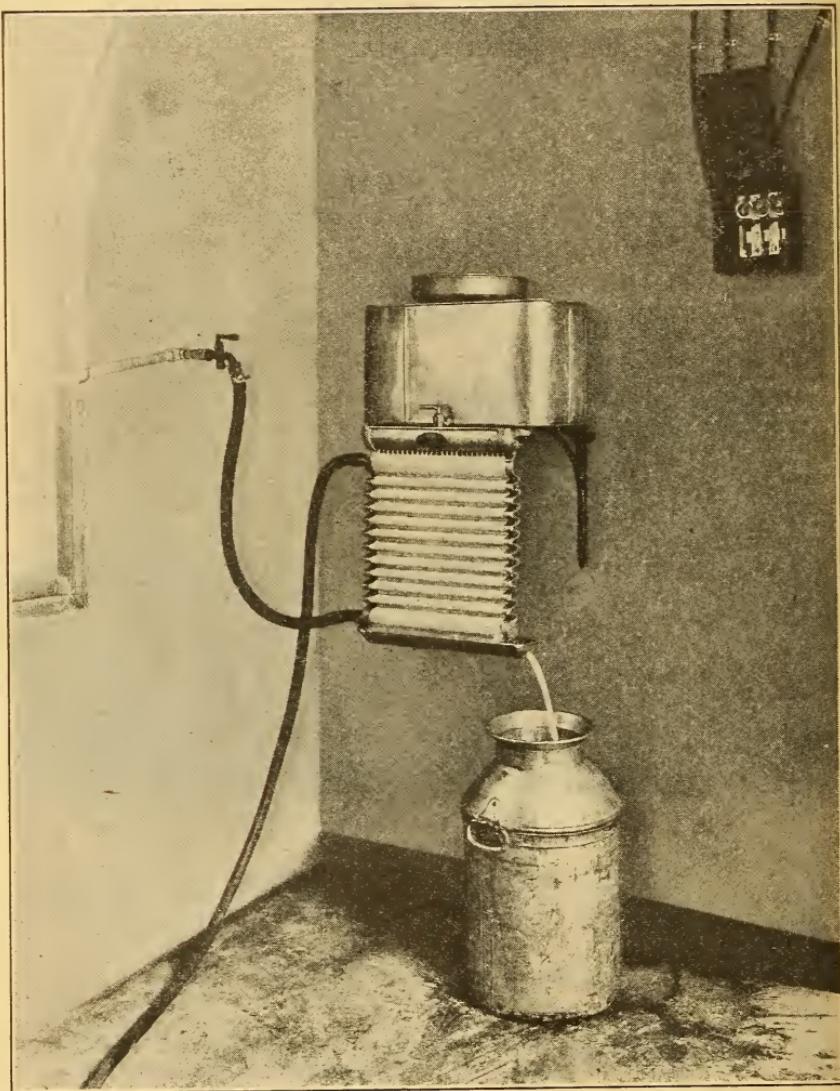
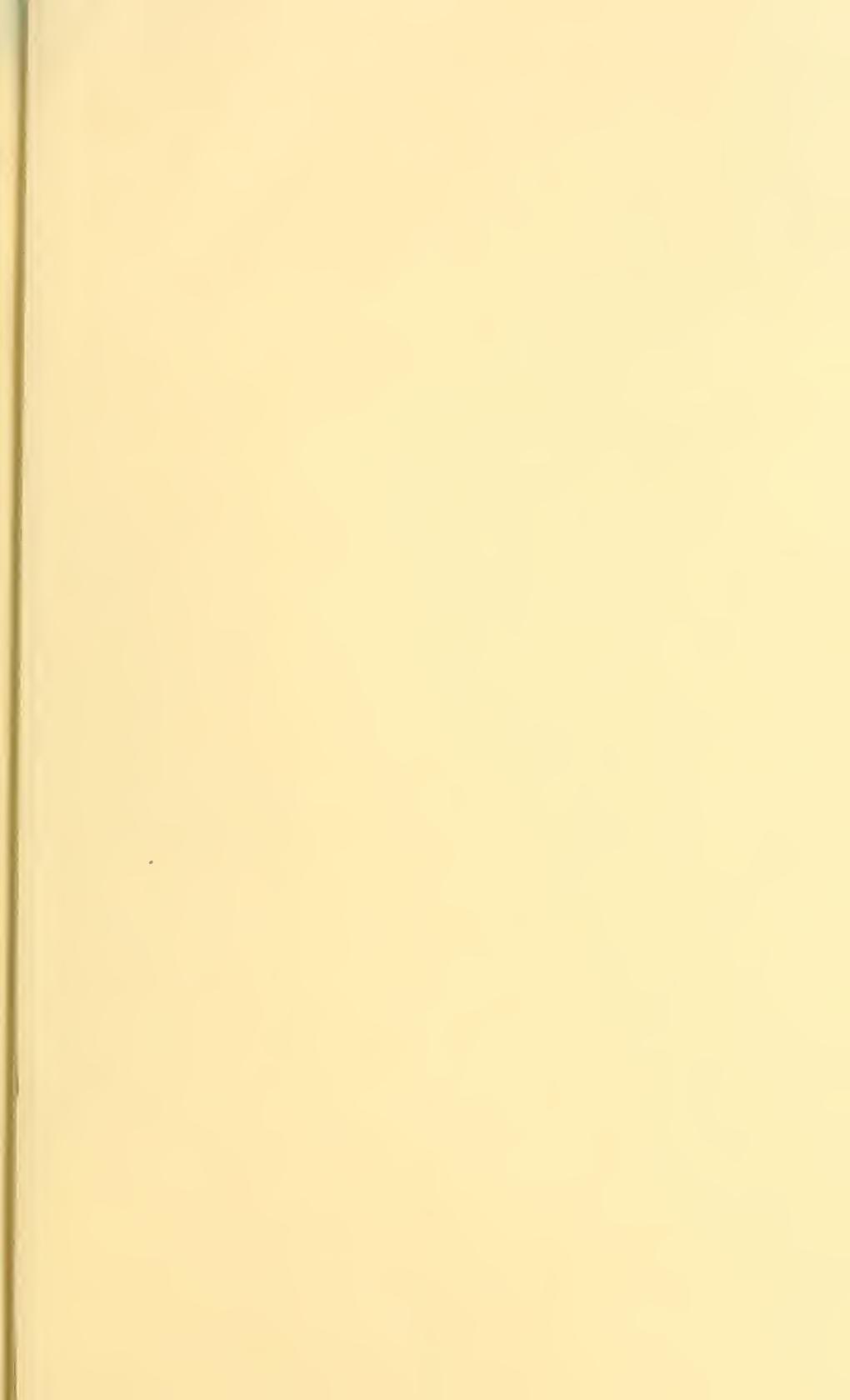


FIG. 2.—The proper use of an aerator and cooler reduces strong feed flavors and odors in milk

properly ventilate cow stables, and (4) aerate milk in order to decrease the intensity of feed and barn taints. Finally, prompt cooling and storing of milk at a low temperature will retard the development of flavors and odors from biological action.





N0016a

05/17/13

46  
S6

